

Computer Science Major, Bachelor of Science (82 credit hours)

The Bachelor of Science in Computer Science program prepares students for graduate school in computer science and also for careers in industry involving complex computations using advanced computer science topics including algorithm analysis and software security. The B.S. in Computer Science provides the foundational scientific and math courses needed for graduate studies, which are also beneficial for understanding the complex problems that arise in advanced areas of computer science.

Major Requirements:

Foundational Courses (30 credit hours):

- CPSC 1400, Computer Science I, 4 credit hours¹
- CPSC 1500, Computer Science II, 4 credit hours
- CPSC 2100, Database Programming, 4 credit hours
- CPSC 2330, Introduction to Web Applications, 4 credit hours
- CPSC 2420, Computer Architecture, 2 credit hours
- CPSC 2430, Programming Languages and Compilers, 2 credit hours
- CPSC 2500, Data Structures and Algorithms, 4 credit hours
- MATH 2200/CPSC 2250, Discrete Mathematical Structure, 4 credit hours
- ENGR 2200, Foundations of Digital Electronics, 2 credit hours

Professional Core (20 hours):

- CPSC 3380, Applied Cryptography and Security, 4 credit hours
- CPSC 3410, Computer Networks, 4 credit hours
- CPSC 4420, Operating Systems, 4 credit hours
- CPSC 4430, Software Engineering, 4 credit hours
- CPSC 4950, Senior Design Capstone 1, 2 credit hours²
- CPSC 4960, Senior Design Capstone 2, 2 credit hours³

Mathematics and Science Core (20 hours):

- MATH 2010, Calculus I, 4 credit hours
- MATH 2020, Calculus II, 4 credit hours
- MATH 3010, Linear Algebra, 4 credit hours
- MATH 4010, Statistics, 4 credit hours
- PHYS 2240, Physics I, 4 credit hours

Computer Science Elective (6 hours):

- Either CPSC 3500 Design & Analysis of Algorithms, 4 credit hours OR
CPSC 3520 Introduction to Artificial Intelligence, 4 credit hours
- And remaining 2-3 credit hours from courses numbered CPSC/ENGR 2000 and above.

¹ This course fulfills the Quantitative Ways of Knowing requirement in the Liberal Arts Program.

² This course fulfills one Writing Intensive requirement in the Liberal Arts Program.

³ This course fulfills the Speaking Intensive requirement in the Liberal Arts Program, and also the Experiential Learning requirement.

Questions? Please contact the [Department of Computer Science](#).



Mathematics and Science Electives (6 hours):

An additional 6 credit hours is required in combination from:

- MATH 3020 and above
- CHEM 2110 and above
- PHYS 2250 and above

NOTE: All students must complete 120 total credit hours to graduate from Anderson University.

Questions? Please contact the [Department of Computer Science](#).

Proposed Course Sequence:

- Freshman: CPSC 1400, MATH 2010; CPSC 1500, MATH 2020, PHYS 2240
- Sophomore: CPSC 2100, 2500, MATH 3010, ENGR 2200; CPSC 2420, 2430, 2330, MATH 2200/CPSC 2250
- Junior: CPSC 3380, 4430, MATH 4010; CPSC 4420, ENGR 4050/CPSC 3410, CPSC 3500/3520
- Senior: CPSC 4950, Computer Science Elective, Math/Science Elective; CPSC 4960, Math/Science Elective

Computer Science Major, Bachelor of Science Suggested Course Sequence

SEMESTER 1		SEMESTER 2	
CPSC 1400 (Quant. Reason.)	4 Hours	CPSC 1500	4 Hours
MATH 2010	4 Hours	MATH 2020	4 Hours
ENGL 1100/ENGL 1110	3-4 Hours	PHYS 2240	4 Hours
LART 1050	1 Hour	ENGL 1120	3 Hours
Foreign Language	4 Hours		

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SEMESTER 3		SEMESTER 4	
CPSC 2100	4 Hours	CPSC 2330	4 Hours
CPSC 2500	4 Hours	CPSC 2420	2 Hours
MATH 3010	4 Hours	CPSC 2430	2 Hours
ENGR 2200	2 Hours	MATH 2200/CPSC 2250	4 Hours
BIBL 2000	3 Hours	COMM 1000	3 Hours

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SEMESTER 5		SEMESTER 6	
CPSC 3380	4 Hours	CPSC 4420	4 Hours
CPSC 4430	4 Hours	ENGR 4050/CPSC 3410 (previous fall)	3 Hours
MATH 4010	4 Hours	CPSC 3500/3520	4 Hours
Personal Wellness	2 Hours	Social & Behavioral Ways of Knowing	3 Hours
		Global/Intercultural Ways of Knowing	3 Hours

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SEMESTER 7		SEMESTER 8	
CPSC 4950 (WI)	2 Hours	CPSC 4960 (SI, Exp. Learn.)	2 Hours
CPSC Elective	3 Hours	Math/Science Elective	3-4 Hours
Math/Science Elective	3-4 Hours	Civic Ways of Knowing	3 Hours
Christian Ways of Knowing	3 Hours	Writing Intensive	3 Hours
Aesthetic Ways of Knowing	3 Hours	Civil Discourse & C.R.	2-4 Hours

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Questions? Please contact the [Department of Computer Science](#).